

REMARKS

Applicants respectfully request entry of the foregoing and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.112, and in light of the remarks which follow.

Claims 15-22 and 24-37 are pending in the application.

By the above amendments, Applicants amended Claim 30 to depend from independent Claim 15 instead of canceled Claim 23. A claim that has been amended in a manner that does not narrow the scope of the claim should be accorded its full range of equivalents.

Applicants thank the Examiner for acknowledging Applicants' Request for Continued Examination (RCE), withdrawing the finality of the previous Official Action, and entering Applicants' submission of May 11, 2009.

Turning now to the Official Action, Claim 30 stands objected to for depending from a canceled claim. In order to obviate the objection, Applicants amended Claim 30 to depend from Claim 15 instead of canceled Claim 23.

Reconsideration and withdrawal of the claim objection are respectfully requested.

Claims 15, 18, 21, 24-25 and 30-33 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bruning (U.S. Patent No. 6,315,931). For at least the reasons that follow, withdrawal of the rejection is in order.

Independent Claim 15 recites a process for preparing a pearl based on expanded polymer and having a continuous skin, comprising the following successive steps:

- a) extruding an expandable composition comprising a thermoplastic polymer and an expanding agent, in molten state, to effect expansion thereof, and
- b) cooling using a liquid and chopping the expanded material thus obtained, wherein the step of cooling and chopping is performed at the die outlet.

(Emphasis added.)

Bruning relates to a method for producing a foam granulate, wherein in a thermoplastic synthetic material is placed in an extruder, this synthetic material is melted, and a pressurized expanding agent is fed through one or several injection nozzles and the molten material enriched with the expanding agent is foamed as it exists a perforate plate arranged at the outlet of the extruder and is granulated by a cutting machine arranged behind the perforate plate. (See, Bruning at Col. 1, lines 4-11.)

It is well-established that in order to demonstrate anticipation under § 102(b), each feature of the claim at issue must be found, either expressly described or under principles of inherency, in a single prior art reference. (See, *Kalman v. Kimberly-Clark Corp.*, 218 U.S.P.Q. 789 (Fed. Cir. 1983).) That is not the case here.

In particular, the presently claimed process includes, *inter alia*, step (a) of extruding an expandable composition comprising a thermoplastic polymer and an expanding agent, in molten state, to affect expansion and step (b) cooling using a liquid and chopping the expanded material thus obtained wherein the cooling and chopping is performed at the dye outlet. This particular combination, including the cooling and chopping being performed at the dye outlet, enables the production of pearls (e.g., spherical or essentially spherical articles) based on an expanded polymer having a continuous skin. (See, for example, [0019] of the instant

specification.) In stark contrast, Bruning describes a method of producing foamed semi-spherical granulates. (See, Bruning at Abstract, Col. 2, lines 27, 35 and 62 and Col 3, lines 11 and 31). The semi-spherical foam granulates of Bruning are obtained by a specific process that is quite different in that the expansion of material out of the extruder occurs when the material leaves the perforated plate. (See, Bruning at Col. 2, lines 22-30 and lines 35-38.) Furthermore, the expanded material of Bruning is cut at the extruder outlet by a granulating machine and then comes to a flowing cooling medium into which the molten material directly escapes. (See, Bruning, for example, at Col. 2, lines 2-8.) Further details are provided in Examples 1 and 2 wherein the disclosure explains that the polymer is at a temperature of 192° or 195°C existing the perforate plate before the cutting tip and then escapes into the flowing water.

Accordingly, Applicants respectfully submit that Bruning does not anticipate the subject matter of Claim 15 because Bruning does not expressly or inherently disclose each feature in the combination of features defined in the claim. Instead, Bruning is focused on the expansion of polymer out of an extruder in order to obtain in real time a closed elastic film on a molten material surface (see, Bruning at Col. 2, lines 35-62) and then obtaining foam semi-spherical granulates.

For at least these reasons, Claim 15 is patentable over Bruning. The remaining claims depend, directly or indirectly, from Claim 15 and are, therefore, also patentable over Bruning for at least the reasons that Claim 15 is patentable. Reconsideration and withdrawal of the rejection of Claims 15, 18, 21, 24-25 and 30-33 are respectfully requested.

Claims 16-17, 20, 22 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruning in view of Pontiff (EP 0450205) and Claim 19 stands rejected under § 103 over Bruning in view of Amano (U.S. Patent No. 5,234,640). For at least the reasons that follow, withdrawal of the rejections is in order.

Claim 15 is recited above. Each of the above-rejected dependant claims depends, directly or indirectly, from independent Claim 15 and therefore necessarily includes each feature defined in the combination of features recited in Claim 15.

Bruning is also described above.

Pontiff relates to a process for producing shrunken moldable beads of foamed thermoplastic polymers, e.g., polyolefins and particularly beads of crosslinked polyolefins. (See, Pontiff at page 1, lines 5-10.)

Amano relates to a process for providing a thermoplastic polyester series resin foamed material or molding thereof. (See Amano at Col. 1, lines 5-8.)

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all of the claim features. (See, *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).) In addition, "all words in a claim must be considered in judging the patentability of that claim against the prior art." (See, *In re Wilson*, 424 F.2d 1382, 1385; 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970. See also, M.P.E.P. § 2143.03.) Applicants submit that these requirements have not been met.

For example, for at least all of the reasons presented in detail above, Bruning does not teach or suggest all of the features of Claim 15, which are necessarily present in the above-rejected claims that are directly or indirectly dependent thereon.

As a result, the recited combinations of cited references also do not reflect a proper consideration of "all words" in Claim 15, which are also necessarily present in the rejected dependant claims. For example, Applicants submit that Bruning does not disclose or fairly suggest the combination of features recited in Claim 15 including, *inter alia*, cooling using a liquid and chopping expanded material thus obtained wherein the cooling and chopping is performed at the dye outlet, as recited in Claim 15. Moreover, Applicants submit that the secondary references Pontiff and Amano do not overcome these deficiencies of Bruning.

Accordingly, Applicants respectfully submit that the recited combinations of Bruning in view of Pontiff and Bruning in view of Amano do not teach or suggest all of the claimed features and do not provide proper consideration of "all words" in Claim 15 in judging the patentability of the rejected dependent claims against the cited prior art references.

Furthermore, in establishing a *prima facie* case of obviousness, it is incumbent upon the Patent Office to provide reasons *why* one of ordinary skill in the art would have been led to modify a prior art reference or combine reference teachings to arrive at the claimed subject matter. Applicants submit that in the present case, no such factors or motivation for combining Bruning and Pontiff or Bruning and Amano exist.

Specifically, the Official Action does not provide adequate information to support the position that it would have been obvious to modify the different process of Bruning for producing foam semi-spherical granulates to include the combination of features recited in Claim 15. That is, while Bruning is focused on the expansion of a polymer out of an extruder to obtain a closed elastic film or molten material surface

and then obtain foamed semi-spherical granulates, nothing in any of the cited references, alone or in combination, discloses or fairly suggests modifying such a process to include other features so that the process of Bruning will also be capable of preparing a pearl based on an expanded polymer and having a continuous skin, as recited in Claim 15.

For at least these reasons, Claims 16-17, 20, 22 and 29 are patentable over Bruning in view of Pontiff and Claim 19 is patentable over Bruning in view of Amano. Reconsideration and withdrawal of the § 103(a) rejections are respectfully requested.

From the foregoing, Applicants earnestly solicit further and favorable action in the form of a Notice of Allowance.


If there are any questions concerning this paper or the application in general, Applicants invite the Examiner to telephone the undersigned at the Examiner's earliest convenience.

Respectfully submitted,

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